

## Annual Statement of the Financial Condition of the Massachusetts Teachers' Retirement System

To the Public Employee Retirement Administration  
Commission  
for the year ended June 30, 2016

# Annual Statement of the Financial Condition of the Massachusetts Teachers' Retirement System

To the Public Employee Retirement Administration Commission  
for the fiscal year ended June 30, 2016

DATE OF FILING: DECEMBER 16, 2016

## THE MASSACHUSETTS TEACHERS' RETIREMENT BOARD

**Jeff Wulfson**

Chairman

Deputy Commissioner of Department of Elementary and Secondary Education

**Deborah B. Goldberg**

State Treasurer

Chairman, Pension Reserves Investment Management (PRIM) Board

**Suzanne M. Bump**

State Auditor

**Dennis J. Naughton**

Elected by the membership

MTRS appointed representative to the PRIM Board

Retired Massachusetts educator

**Richard L. Liston**

Appointed by the Board

Retired Massachusetts educator

**Jacqueline A. Gorrie**

Elected by the membership

Retired Massachusetts educator

**Anne Wass**

Appointed by the Governor

Retired Massachusetts educator

**Main Office**

500 Rutherford Ave., Suite 210

Charlestown, MA 02129-1628

Phone 617-679-MTRS (6877)

Fax 617-679-1661

**Western Regional Office**

One Monarch Place, Suite 510

Springfield, MA 01144-4028

Phone 413-784-1711

Fax 413-784-1707

**Online**

[mass.gov/mtrs](http://mass.gov/mtrs)



# MTRS Annual Statement

For the fiscal year ended June 30, 2016

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**Board Certification of Annual Statement**

ANNUAL STATEMENT  
for the  
FINANCIAL CONDITION  
of the  
**MASSACHUSETTS TEACHERS' RETIREMENT SYSTEM**  
Organized under the Laws of the Commonwealth of Massachusetts  
to the

**COMMISSIONER OF PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION COMMISSION  
OF THE COMMONWEALTH OF MASSACHUSETTS  
PURSUANT TO THE LAWS THEREOF**

Massachusetts Teachers' Retirement System  
500 Rutherford Avenue, Suite 210, Charlestown, MA 02129-1628  
Telephone: 617-679-6877

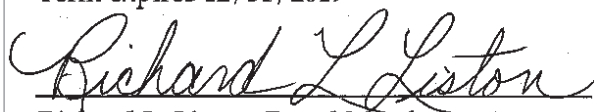
We, the undersigned members of the Teachers' Retirement System, certify under the penalties of perjury, that we are the official board members of said retirement system, and that on the thirtieth day of June last, all of the herein-described assets were the absolute property of said retirement system, free and clear from any liens or claims thereon, except as stated, and the following statements, with the schedules and explanations therein contained, annexed, or referred to, are a full and correct exhibit of all the assets, liabilities, income and disbursements, changes in fund balances and of the conditions and affairs of the said retirement system on the said thirtieth day of June last, and for the year ended on that date, according to the best of our information, knowledge and belief, respectively.

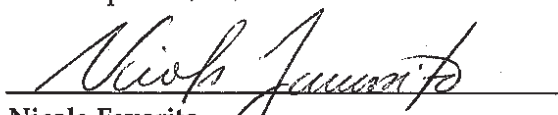
**MASSACHUSETTS TEACHERS' RETIREMENT SYSTEM**

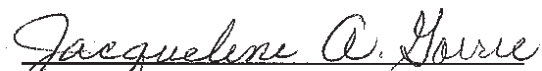
  
Jeff Wulfson, Chairman

Designee of Commissioner of Elementary and Secondary Education


  
Dennis J. Naughton, Board Member  
Term expires 12/31/2019

  
Richard L. Liston, Board Member  
Term expires 1/31/2020

  
Nicola Favorito  
Designee of Deborah B. Goldberg

  
Jacqueline A. Gorrie, Board Member  
Term expires 12/31/2019

  
Anne Wass, Board Member  
Term expires 4/18/2018

  
Joannah M. Quinn  
Designee of Suzanne M. Bump

## Public Pension Coordinating Council Award



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2016***

Presented to

***Massachusetts Teachers Retirement System***

In recognition of meeting professional standards for  
plan funding and administration as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

A handwritten signature in dark ink, reading 'Alan H. Winkle'. The signature is fluid and cursive, with the first name 'Alan' being more prominent.

Alan H. Winkle  
Program Administrator

## Members of the Board



**Jeff Wulfson**  
Chairman

Deputy Commissioner  
of Department of  
Elementary and  
Secondary Education



**Jacqueline A. Gorrie**

Elected by  
the membership

Retired Massachusetts  
educator



**Deborah B. Goldberg**  
State Treasurer

Chairman,  
Pension Reserves  
Investment  
Management (PRIM)  
Board



**Anne Wass**

Appointed by  
the Governor

Retired  
Massachusetts  
educator



**Suzanne M. Bump**  
State Auditor



**Dennis J. Naughton**

Elected by the  
membership

Retired Massachusetts  
educator;  
MTRS appointed  
representative  
to the PRIM Board



**Richard L. Liston**

Appointed by the  
Board

Retired  
Massachusetts  
educator

## Annual Statement Balance Tests

For the year ended June 30, 2016

2016

### ASSET BALANCE

Assets Previous Year	\$ 25,429,068,185
Income Current Year	2,596,873,783
Disbursements Current Year	3,083,869,709
<b>Assets Current Year</b>	<b>\$ 24,942,072,259</b>

### ASSET DIFFERENCE

Assets Current Year	\$ 24,942,072,259
Assets Previous Year	25,429,068,185
<b>Difference</b>	<b>\$ (486,995,926)</b>

### INCOME DIFFERENCE

Income Current Year	\$ 2,596,873,783
Disbursements Current Year	3,083,869,709
<b>Difference</b>	<b>\$ (486,995,926)</b>

### FUND CHANGE DIFFERENCE

Total Fund Change Credits Current Year	\$ 4,028,929,707
Total Fund Change Debits Current Year	4,515,925,633
<b>Difference</b>	<b>\$ (486,995,926)</b>

**Annual Statement Balance Tests**

Continued

## Three-Year Comparison

	Fiscal 2014	Fiscal 2015	Fiscal 2016
<b>ASSET BALANCE</b>			
Assets Previous Year	\$ 22,698,277,296	\$ 25,538,645,330	\$ 25,429,068,185
Income Current Year	5,665,476,722	2,860,878,313	2,596,873,783
Disbursements Current Year	2,825,108,688	2,970,455,458	3,083,869,709
<b>Assets Current Year</b>	<b>\$ 25,538,645,330</b>	<b>\$ 25,429,068,185</b>	<b>\$ 24,942,072,259</b>

<b>ASSET DIFFERENCE</b>			
Assets Current Year	\$ 25,538,645,330	\$ 25,429,068,185	\$ 24,942,072,259
Assets Previous Year	22,698,277,296	25,538,645,330	25,429,068,185
<b>Difference</b>	<b>\$ 2,840,368,034</b>	<b>\$ (109,577,145)</b>	<b>\$ (486,995,926)</b>

<b>INCOME DIFFERENCE</b>			
Income Current Year	\$ 5,665,476,722	\$ 2,860,878,313	\$ 2,596,873,783
Disbursements Current Year	2,825,108,688	2,970,455,458	3,083,869,709
<b>Difference</b>	<b>\$ 2,840,368,034</b>	<b>\$ (109,577,145)</b>	<b>\$ (486,995,926)</b>

<b>FUND CHANGE DIFFERENCE</b>			
Total Fund Change			
Credits Current Year	\$ 7,191,222,286	\$ 4,331,658,480	\$ 4,028,929,707
Total Fund Change			
Debits Current Year	4,350,854,252	4,441,235,625	4,515,925,633
<b>Difference</b>	<b>\$ 2,840,368,034</b>	<b>\$ (109,577,145)</b>	<b>\$ (486,995,926)</b>



## Assets and Liabilities

		Fiscal 2014	Fiscal 2015	Fiscal 2016
1040	Cash	\$ 126,380,632	\$ 92,830,443	\$ 84,499,690
1198	PRIT Cash Account	30,966,884	25,844,400	22,315,100
1199	PRIT Capital Fund	25,293,748,003	25,215,178,709	24,744,674,611
1398	Accounts Receivable	84,389,653	92,257,218	88,877,468
1400	Prepaid Postage	225,958	159,812	168,844
1350	Prepaid Contracts	72,571	94,595	133,320
1900	Intangible Software Costs	15,095,812	15,220,975	10,916,801
2020	Accounts Payable	(3,709,563 )	(5,511,199 )	(3,268,681 )
2097	Deferred Revenue	(8,524,620 )	(7,006,768 )	(6,244,894 )
	Total	<b>\$ 25,538,645,330</b>	<b>\$ 25,429,068,185</b>	<b>\$ 24,942,072,259</b>
3293	Annuity Savings Fund	\$ 6,136,293,889	\$ 6,431,101,388	\$ 7,160,338,512
3294	Annuity Reserve Fund	2,532,361,548	2,497,337,278	2,394,870,213
3295	Military Service Fund	222,989	221,025	237,059
3296	Pension Fund	—	—	—
3298	Expense Fund	—	—	—
3297	Pension Reserve Fund	16,869,766,904	16,500,408,494	15,386,626,475
	Total	<b>\$ 25,538,645,330</b>	<b>\$ 25,429,068,185</b>	<b>\$ 24,942,072,259</b>

## Statement of Funds Flow

	July 1 2015 Balance	Receipts	Inter-Fund Transfers	Disbursements	June 30 2016 Balance
Annuity Savings Fund	\$ 6,431,101,388	\$ 757,498,692	\$ 19,876,596	\$ 48,138,164	\$ 7,160,338,512
Annuity Reserve Fund	2,497,337,278	76,124,546	341,630,855	520,222,466	2,394,870,213
Pension Fund	0	1,272,527,751	1,070,556,922	2,343,084,673	0
Military Service Fund	221,025	24,483	(8,449 )	0	237,059
Expense Fund	0	172,424,406	0	172,424,406	0
Pension Reserve Fund	16,500,408,494	318,273,905	(1,432,055,924 )	0	15,386,626,475
<b>Total All Funds</b>	<b>\$ 25,429,068,185</b>	<b>\$ 2,596,873,783</b>	<b>\$ 0</b>	<b>\$ 3,083,869,709</b>	<b>\$ 24,942,072,259</b>

## INTER-FUND TRANSFERS

Transfer from...	Annuity Savings Fund	Annuity Reserve	Pension Fund	Military Service Fund	Expense Fund	Pension Reserve Fund	Total
Annuity Savings Fund to Annuity Reserve Fund	\$(341,622,406)	\$ 341,622,406	0	0	0	0	0
Pension Reserve Fund to Annuity Savings Fund	361,499,002	0	0	0	0	(361,499,002)	0
Military Service to Annuity Reserve Fund	0	8,449	0	(8,449)	0	0	0
Pension Reserve Fund to Pension Fund for Fund Pensions	0	0	1,070,556,922	0	0	(1,070,556,922)	0
	\$ 19,876,596	\$ 341,630,855	\$ 1,070,556,922	\$ (8,449)	\$ 0	\$ 1,432,055,924	\$ 0

## Receipts

		Fiscal 2014	Fiscal 2015	Fiscal 2016
<b>Annuity Savings Fund</b>				
4891	Members' Deductions	\$ 653,327,864	\$ 669,941,211	\$ 699,421,905
4892	Transfers from Other Systems	18,237,305	16,399,038	25,875,712
4893	Member Make-Up Payments and Redeposits	16,405,508	16,296,203	15,270,866
4900	Member Payments from Rollovers	12,870,651	16,592,253	10,889,016
4820	Investment Income Credited to Members' Accounts	5,475,985	5,706,167	6,041,193
	<b>Subtotal</b>	<b>\$ 706,317,313</b>	<b>\$ 724,934,872</b>	<b>\$ 757,498,692</b>
<b>Annuity Reserve Fund</b>				
4820	Investment Income	79,644,451	78,540,492	76,124,546
	<b>Subtotal</b>	<b>\$ 79,644,451</b>	<b>\$ 78,540,492</b>	<b>\$ 76,124,546</b>
<b>Pension Fund</b>				
4894	QEBA	50,000	0	0
4898	3(8)(c) Reimbursements from Other Systems	21,175,997	20,899,153	19,494,788
4899	Received from Commonwealth for COLA	192,314,768	208,707,359	225,120,921
4894	Pension Fund Appropriation	843,103,232	930,307,642	1,027,796,079
4840	Workers' Compensation Settlement	34,346	22,250	115,963
	<b>Subtotal</b>	<b>\$ 1,056,678,343</b>	<b>\$ 1,159,936,404</b>	<b>\$ 1,272,527,751</b>
<b>Military Service Fund</b>				
4890	Contributions Received for Military Service	3,590	11,583	24,246
4820	Investment Income	222	224	237
	<b>Subtotal</b>	<b>\$ 3,812</b>	<b>\$ 11,807</b>	<b>\$ 24,483</b>
<b>Expense Fund</b>				
4896	Expense Fund Appropriation	173,839,873	176,921,715	172,424,406
	<b>Subtotal</b>	<b>\$ 173,839,873</b>	<b>\$ 176,921,715</b>	<b>\$ 172,424,406</b>
<b>Pension Reserve Fund</b>				
4889	Commonwealth Capital Gain Revenue	1,443,260	0	0
4831	Federal Grant Reimbursement	3,431,861	3,618,410	2,789,767
4822	Interest Not Refunded	305,777	225,100	147,655
4820	Excess Investment Income	3,643,805,292	716,689,191	315,335,760
4825	Section 91, Recovery Due to Excess Earnings	6,740	322	723
	<b>Subtotal</b>	<b>\$ 3,648,992,930</b>	<b>\$ 720,533,023</b>	<b>\$ 318,273,905</b>
<b>TOTAL RECEIPTS</b>		<b>\$ 5,665,476,722</b>	<b>\$ 2,860,878,313</b>	<b>\$ 2,596,873,783</b>

## Disbursements

		Fiscal 2014	Fiscal 2015	Fiscal 2016
<b>Annuity Savings Fund</b>				
5757	Refunds to Members	\$ 36,744,377	\$ 36,884,281	\$ 36,615,536
5757.1	Section 11 Active Death Refunds	2,305,472	1,787,757	1,861,546
5756	Transfers to Other Systems	8,114,298	10,781,016	9,661,082
	<b>Subtotal</b>	<b>\$ 47,164,147</b>	<b>\$ 49,453,054</b>	<b>\$ 48,138,164</b>
<b>Annuity Reserve Fund</b>				
5750	Annuities Paid	435,130,575	494,252,852	520,222,466
	<b>Subtotal</b>	<b>\$ 435,130,575</b>	<b>\$ 494,252,852</b>	<b>\$ 520,222,466</b>
<b>Pension Fund</b>				
5751	Pensions Paid (Regular Pension Payments)	1,872,862,280	1,927,622,454	1,993,194,286
5755	3(8)(c) Reimbursements to Other Systems	103,787,767	113,494,867	4,341,541
5755.1	Boston Teachers' Payment	—	—	120,434,000
5753	QEBA	9,278	3,158	3,925
5752	COLAs Paid	192,314,768	208,707,358	225,120,921
	<b>Subtotal</b>	<b>\$ 2,168,974,093</b>	<b>\$ 2,249,827,837</b>	<b>\$ 2,343,084,673</b>
<b>Military Service Fund</b>				
4890	Return to Municipality for Members Who Withdrew their Funds	—	—	—
	<b>Subtotal</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ —</b>
<b>Expense Fund</b>				
5119	Salaries	7,297,592	7,981,494	7,990,472
5304	Management Fees	132,164,821	132,578,123	128,709,643
5308	Legal Expenses	55,766	36,462	57,329
5310	Fiduciary insurance	—	—	37,434
5311	Service Contracts	1,467,788	2,331,943	2,300,923
5312	Rent Paid	755,218	786,750	848,291
5320	Education and Training	4,676	15,684	33,253
5588	PERAC Expenses	3,695,935	3,964,772	4,952,481
5589	Reimbursement for Direct Deposit Fees	6,109	—	—
5589	Administrative Expenses	437,413	531,145	475,029
5599	Furniture and Equipment	179,554	161,865	108,831
5719	Travel	26,685	31,144	25,646
5897	Federal Grants Distributed	3,431,861	3,618,410	2,789,767
5900	3(8)(c) Reimbursement to General Fund	21,175,997	20,899,153	19,494,789
5589.1	Professional Expense	—	179,212	172,673
5829	Amortization Expense	3,140,458	3,805,558	4,427,846
	<b>Subtotal</b>	<b>\$ 173,839,873</b>	<b>\$ 176,921,715</b>	<b>\$ 172,424,406</b>
<b>Pension Reserve Fund</b>				
	<b>Subtotal</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ —</b>
<b>TOTAL DISBURSEMENTS</b>		<b>\$ 2,825,108,688</b>	<b>\$ 2,970,455,458</b>	<b>\$ 3,083,869,709</b>

## Investment Income

	Fiscal 2014	Fiscal 2015	Fiscal 2016
INVESTMENT INCOME			
Investment Income received from:			
Cash	\$ 173,081	\$ 188,218	\$ 433,246
Pooled or Mutual Funds	718,402,086	648,449,635	678,029,499
<b>Total Investment Income</b>	<b>\$ 718,575,167</b>	<b>\$ 648,637,853</b>	<b>\$ 678,462,745</b>
4884 Realized Gains	1,234,415,865	1,068,371,371	600,036,270
4886 Unrealized Gains	2,937,694,770	959,676,401	1,958,518,982
	<b>\$ 4,172,110,635</b>	<b>\$ 2,028,047,772</b>	<b>\$ 2,558,555,252</b>
4887 Less Unrealized Losses	(987,919,980)	(1,698,827,836)	(2,641,543,633)
4885 Realized loss	—	—	(25,548,222)
<b>Net Investment Income (loss)</b>	<b>\$ 3,902,765,823</b>	<b>\$ 977,857,789</b>	<b>\$ 569,926,142</b>
INCOME REQUIRED			
3293 Annuity Savings Fund	5,475,985	5,706,167	6,041,193
3294 Annuity Reserve Fund	79,644,451	78,540,492	76,124,546
3295 Military Service Fund	222	224	237
3298 Expense Fund	173,839,873	176,921,715	172,424,406
<b>Total Income Required</b>	<b>\$ 258,960,531</b>	<b>\$ 261,168,598</b>	<b>\$ 254,590,382</b>
<b>Net Investment Income</b>	<b>\$ 3,902,765,823</b>	<b>\$ 977,857,789</b>	<b>\$ 569,926,142</b>
<b>Less Income Required</b>	<b>258,960,531</b>	<b>261,168,598</b>	<b>254,590,382</b>
<b>Excess Income (Loss) to Pension Reserve Fund</b>	<b>\$ 3,643,805,292</b>	<b>\$ 716,689,191</b>	<b>\$ 315,335,760</b>

## Membership Information

### Active Members

Previous Year Ending June 30, 2015	88,814
Net Change During Report Year 2016	2,686
<b>Active Membership Current Year Ending June 30, 2016</b>	<b>91,500</b>

### Inactive Members

Previous Year Ending June 30, 2015	27,408
Net Change During Report Year 2016	(67)
<b>Inactive Membership Current Year Ending June 30, 2016</b>	<b>27,341</b>

### Retired Members, Beneficiaries and Survivors

Previous Year Ending June 30, 2015	62,873
Net Change During Report Year 2016	1,513
<b>Retired, Beneficiary and Survivor Membership Current Year Ending June 30, 2016</b>	<b>64,386</b>

Superannuation	33,528
Minimum Pension Retirements	146
Pop-Up Retirements	885
Early Retirements	869
RetirementPlus Retirements	24,156
Survivors–Active	1,978
Survivors–Retiree	1,871
Accidental Death Retirements	15
Ordinary Disability	409
Accidental Disability	329
Termination	169
Guardian	21
Minimum Pension–Survivor	10

<b>Total Membership, June 30, 2016</b>	<b>183,227</b>
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## Notes on the Financial Statements

### ■ Significant Accounting Policies

The accounting records of the System for June 30, 2016 are maintained on a fiscal year basis in accordance with the standards and procedures established by the Executive Director of the Public Employee Retirement Administration Commission. All investments are stated at market value at the end of the year.

#### **Annuity Savings Fund**

The Annuity Savings Fund is the fund to which all members' contributions are deposited. Members withdrawing from the System received a refund of their total accumulated contributions and a required amount of interest. Refunds to members for the report year 2016 were \$36,615,536 and refunds to deceased active members were \$1,861,546 and transfers to other systems were \$9,661,082. The value of the Annuity Savings Fund was \$7.160 billion as of June 30, 2016. In 2016, interest is accrued at a rate of 0.1%.

A reconciliation of the active and inactive member account balances in the MyTRS system to the annuity savings fund balance on the ledger as of June 30, 2016 was performed. Based on this reconciliation, an adjustment of \$361,499,002 was transacted. The effect of this entry was to increase the Annuity Savings Fund and decrease the Pension Reserve Fund.

#### **Annuity Reserve Fund**

The Annuity Reserve Fund is the fund to which a member's account is transferred upon retirement from the Annuity Savings Fund and the Special Fund for Military Service credit. The annuity portion of the retirement allowance is paid from this fund. Interest is credited monthly to this fund at the rate of 3% annually on the previous month's balance. In 2016, an amount of \$341.630 million was transferred to the Annuity Reserve Fund. The value of the Annuity Reserve Fund was \$2.394 billion as of June 30, 2016.

#### **Pension Fund**

The Pension Fund contains the amounts appropriated by the Commonwealth of Massachusetts and investment funds liquidated from the Pension Reserve Investment Trust designated to pay the pension portion of each retirement allowance.

#### **Pension Reserve Fund**

The Pension Reserve Fund is administered by the Pension Reserves Investment Management Board (PRIM Board). The Fund contains amounts appropriated by the Commonwealth of Massachusetts for the purposes of funding future retirement benefits. Any investment income in excess of the amount required to credit the Annuity Savings Fund, Annuity Reserve Fund, Expense Fund and the Special Military Service fund is credited to the Pension Reserve Fund. In 1996, Massachusetts State Teachers' and Employees' Retirement Systems Trust (MASTERS) was merged into the Pension Reserves Investment Trust (PRIT) Fund to form a consolidated pension fund under the management of the Pension Reserves Investment Management Board. Inactive member account balances must be transferred to the Pension Reserve Fund after a period of ten years of inactivity.

### ■ Military Service Fund

The Military Service Fund contains contributions and interest for members while on a military leave for service in the Armed Forces and who receive creditable service for the period of that leave. The balance in the Military Service Fund on June 30, 2016 was \$237,059. Contributions and interest income credited to the Military Service Fund were \$24,246 and \$237 respectively. In 2016, an amount of \$8,449 was transferred to the Annuity Reserve Fund.

### ■ Expense Fund

The Expense Fund contains amounts transferred from investment income for the purpose of administering the Teachers' Retirement System. Due to the nature of the Teachers' Retirement System's funding and payment structure, it is necessary to record any unreimbursed balances in the Accounts Receivable account. No amounts were unreimbursed as of June 30, 2016.

Management fees are amounts paid by the Pension Reserve Investment Trust for managing investments. PERAC requires these costs be accounted for in the expense fund.

3(8)(c) reimbursements to the general fund are \$19,494,789 for 3(8)(c) payments received from other retirement systems which are deposited into the MTRS accounts at Bank of America and then are swept by Treasury and posted to the Commonwealth's General fund. MTRS does not have spending authority on these funds.

Federal grants distributed equal federal grant received in the amount of \$2,789,767. Federal money is a pass-through from school districts to MTRS to the Commonwealth's general fund; MTRS role is administrative in that we collect, deposit and record federal funds to the Commonwealth's general fund with no spending authority.

### ■ Interest-Not-Refunded

Interest-not-refunded is interest forfeited by members upon withdrawal from the System prior to becoming fully vested or forfeited due to criminal convictions. The interest forfeiture applies to members who commenced employment or after January 1, 1984. The 2016 Interest-not-refunded of \$147,655 is recorded as revenue in the Pension Reserve fund.

### ■ 3(8)(c)

A 3(8)(c) reimbursement is the pension benefit reimbursement received from other Massachusetts public retirement systems for the portion of creditable service attained by retirees formerly contributing to another retirement system. The total 3(8)(c) reimbursements received in 2016 for calendar year 2015 were credited to the Commonwealth of Massachusetts General Fund. The Teachers' Retirement System's 3(8)(c) reimbursements from other systems during report year 2016 were \$19,494,788. The amount the Teachers' Retirement System paid to other systems was \$124,775,541 including \$120,434,000 paid to the City of Boston.

	2014	2015	2016
<b>3(8)(c) Reimbursements</b>	\$ 4,255,767	\$ 4,009,867	\$ 4,341,541
<b>Boston Teachers' Payment</b>	99,532,000	109,485,000	120,434,000
<b>Total</b>	\$103,787,767	\$113,494,867	\$124,775,541



### ■ Qualified Excess Benefit Arrangement (QEBA)

To comply with Section 415 of the Internal Revenue Code which imposes limits on benefits and annual additions that restrict retirement benefits, the MTRS has funded a QEBA account. The QEBA account will provide benefits that cannot be provided under a qualified plan due to the limits of section 415 on contributions and benefits. The balance is accounted for in cash.

The Activity in the Account:	Beginning Balance	\$ 71,092
	Revenue	0
	Less Payments	– 3,925
	Balance 6/30/16	\$ 67,167

### ■ Intangible Software Cost: New Line of Business Solution/MyTRS

#### Capital Asset Activity

Computer hardware and software is recorded at cost and is being amortized on a straightline basis over a useful life of 3 years and 7 years respectively.

	June 30, 2015	Increase	Decrease	June 30, 2016
<b>Assets Being Amortized:</b>				
Infrastructure	\$ 866,604	\$ 69,714	—	\$ 936,319
Computer Hardware	227,011	61,826	(125,666)	163,171
Computer Software	27,528,740	81,005	(27,047)	27,582,698
Total	\$ 28,622,355	\$ 212,545	(152,713)	\$ 28,682,188
<b>Less: Accumulated Amortization</b>				
Computer Hardware	\$ (63,840)	\$ 69,296	(63,840)	\$ 69,296
Computer Infrastructure	95,489	287,565	—	383,054
Computer Software	13,242,051	4,070,483	—	17,313,034
	\$ 13,401,380	\$ 4,427,846	(63,840)	\$ 17,765,386
Net Book Value	\$ 15,220,975	\$ 4,640,389	216,553	\$ 10,916,801

### ■ Estate Receivable and Payable

When a member becomes deceased, this event may create a receivable or payable between the retirement system and the estate. At June 30, 2016 the amount due to be received from estates from 2013 to present is \$336,190 and the amount payable to estates including the deceased members' remaining annuity balance is \$1,018,909.

In June 2016 the board voted to write off \$32,374.13 in uncollectible estate account receivables from for year ended June 30, 2013.

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**■ Commonwealth Pension Funding**

The Commonwealth appropriated \$1,252,917,000 for State and Boston Teachers for fiscal 2016.

**Pension Funding Schedule**

COLA	\$ 225,120,921
Pension Fund Appropriation	1,027,796,079

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<b>Total</b>	<b>\$ 1,252,917,000</b>
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**■ Installment Accounts Receivable and Deferred Revenue**

Members may purchase creditable service on an installment basis. There are approximately 2,152 members with \$11,675,918 in potential receivables due for service purchases. Of that total, \$5,431,024 is due to be collected within one year. The remaining \$6,244,894 due to be collected after one year, is reported as a deferred revenue.

## Appendix A

## Detail of Accounts Receivable and Accounts Payable

			2016 Amount
ACCOUNTS RECEIVABLE			
4893	Estate Accounts Receivable	\$	336,190
4893	Allowance for Doubtful Accounts		(186,515)
	<b>Net, Estate Accounts Receivable</b>	<b>\$</b>	<b>149,675</b>
1395	3(8)(c) Accounts Receivable		2,346,853
1395.1	Allowance for Doubtful Accounts		(384,550)
	<b>Net, 3(8)(c) Accounts Receivable</b>	<b>\$</b>	<b>1,962,303</b>
4893	Installment Accounts Receivable	\$	11,675,918
4891	Member Deductions		75,030,812
4840	Workers' Compensation Settlement		41,400
1396.2	Overpayment Receivable		17,360
	<b>Total Accounts Receivable</b>	<b>\$</b>	<b>88,877,468</b>
ACCOUNTS PAYABLE			
5308	Legal	\$	15,133
2021	Accrued Payroll		256,674
5311	Service Contracts		225,280
5589	Administrative Expense		24,760
5719	Travel		1,579
5757	Estate Accounts Payable		1,018,909
2022	Escrow Assets Held in Trust for Members		97,617
2020.1	3(8)(c) Payable		133,403
2020.3	Annuity Accounts Payable		38,655
2096.1	Pinto Deferred Revenue		10,200
5900	3(8)(c) Due to General Fund		1,398,641
2097	Deferred revenue installment purchase		6,244,894
5599	Furniture & Expenses		47,830
	<b>Total Accounts Payable</b>	<b>\$</b>	<b>9,513,575</b>

## Appendix B

## Massachusetts Pension Reserves Investment Trust Statements

**MTRS Cash Fund** For the year ending June 30, 2016***Pension Reserves Investment Management Board***

84 State Street, Suite 250  
Boston, Massachusetts 02109

Deborah B. Goldberg, Treasurer and Receiver General, Chair  
Michael G. Trotsky, CFA, Executive Director

**State Teachers Retirement System**  
**Cash Investment**  
**June 01, 2016 to June 30, 2016**

	Month To Date	Fiscal Year To Date	Calendar Year To Date
<b>Your beginning net asset value for the period was:</b>	19,621,001.38	25,844,400.27	16,424,258.75
<b>Your investment income for the period was:</b>	28,203.67	227,364.95	156,226.60
<b>Your total contributions for the period were:</b>	73,455,426.97	752,835,315.02	401,493,639.32
<b>Your total redemptions for the period were:</b>	(117,892,939.21)	(1,667,879,332.65)	(810,632,902.87)
<b>Your total exchanges for the period were:</b>	47,103,406.71	911,287,351.93	414,873,877.72
<b>Your state appropriations for the period were:</b>	0.00	0.00	0.00
<b>Your ending net asset value for the period was:</b>	22,315,099.52	22,315,099.52	22,315,099.52

As of June 30, 2016 the net asset value of your investment in the Cash Fund was:

**\$22,315,099.52**

If you have any questions regarding your statement, please contact your Senior Client Services Officer Paul Todisco (617) 946-8423.  
*A detailed statement of your account is attached to this summary sheet.*

## Appendix B

## Massachusetts Pension Reserves Investment Trust Statements

## MTRS General Allocation Account

For the year ending June 30, 2016



### Pension Reserves Investment Management Board

84 State Street, Suite 250  
Boston, Massachusetts 02109

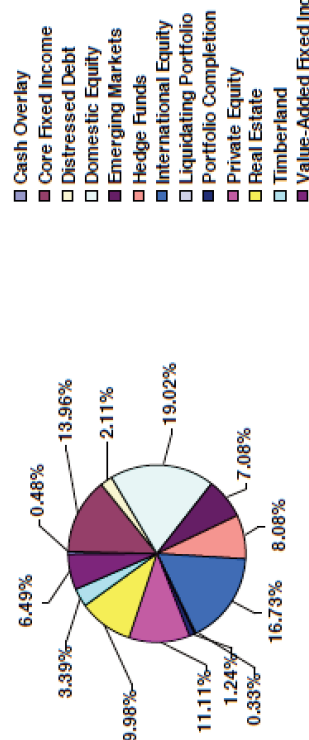
Deborah B. Goldberg, Treasurer and Receiver General, Chair  
Michael G. Trotsky, CFA, Executive Director

#### State Teachers Retirement System General Allocation Account June 01, 2016 to June 30, 2016

	Month To Date	Fiscal Year To Date	Calendar Year To Date
Your beginning net asset value for the period was:	24,579,046,344.33	25,215,178,709.44	24,292,128,790.09
Your change in investment value for the period was:	212,731,673.46	440,783,253.57	867,419,698.71
Your exchanges from (to) the Cash Fund for the period were:	(47,103,406.71)	(911,287,351.93)	(414,873,877.72)
Your ending net asset value for the period was:	24,744,674,611.08	24,744,674,611.08	24,744,674,611.08
Net Change in Investment Value represents the net change through investment activities as follows:			
Gross Investment Income:	92,860,116.46	678,029,499.85	375,794,813.42
Less Management Fees:	(27,467,463.82)	(128,709,642.96)	(65,631,658.63)
Net Investment Income:	65,392,652.64	549,319,856.89	310,163,154.79
Net Fund Unrealized Gains/Losses:	77,957,640.50	(683,024,650.91)	293,097,340.59
Net Fund Realized Gains/Losses:	69,381,380.32	574,488,047.59	264,159,203.33
Net Change in Investment Value as Above:	212,731,673.46	440,783,253.57	867,419,698.71
As of June 30, 2016 the net asset value of your investment in the PRIT Fund was:			<u>\$24,744,674,611.08</u>

#### PRIT Fund Core Asset Allocation

As of June 30, 2016



If you have any questions regarding your statement, please contact your Senior Client Services Officer Paul Todisco (617) 946-8423.  
A detailed statement of your account is attached to this summary sheet.

## Appendix C

### Supplementary Schedules

#### **Members' Balances in the Annuity Savings Account**

For the fiscal year ending June 30, 2016

Previous Balance	\$	6,431,101,388
Total Additions Current Year		751,457,499
Total Interest Current Year		6,041,193
Reductions		(48,138,164)
Transfer to Annuity Reserves		(341,622,406)
Transfer from Pension Reserve Fund		361,499,002
<b>Balance Current Year</b>	<b>\$</b>	<b>7,160,338,512</b>

## Appendix C

## Supplementary Schedules

**Schedule 1: Cash Account Activity During the Year**

For the fiscal year ending June 30, 2016

Type of Account, Account Number, Interest Rate	Book value at the End of the Previous Year	Total Deposits this Year	Income Reinvested/ Redeposited into Account	Withdrawals During the Year	Total Book Value 12/31 this Year	Cash Income Paid to System Not Reinvested or Redeposited	Interest due and accrued 12/31
Bank of America 005102-3319	\$ 0	\$ 26,426,625	\$ 0	\$ 26,426,625	\$ 0	\$ 0	\$ 0
Mellon 007-6347	302,804	760,662,080	0	760,619,855	345,029	0	0
Santander Bank 88884804	0	110,000	0	110,000	0	0	0
Santander Bank 88882154	62,327	108,234	0	72,943	97,618	0	0
Bank Cash	\$ 365,131	\$ 787,306,938	\$ 0	\$ 787,229,423	\$ 442,647	\$ 0	\$ 0
Cash Available on MMARS	92,465,312	2,942,446,216	0	2,950,854,495	84,057,044	0	0
Total Cash	\$ 92,830,443	\$3,729,753,164	\$ 0	\$3,738,083,918	\$84,499,690	\$ 0	\$ 0
PRIT Cash Fund	\$ 25,844,400	\$1,668,242,433	\$ 0	\$ 1,671,771,734	\$22,315,100	\$ 0	\$ 0

## Appendix C

### Supplementary Schedules

#### **Schedule 5: Schedule of PRIT Funds**

For the year ending June 30, 2016

	PERAC Ledger Number 1199 PRIT Capital Fund
Market Value, End of Previous Year	\$ 25,215,178,709
Total Purchases this Year at Cost/Member Deductions	—
Reinvested Investment Income	1,431,092,178
Realized Gains	600,036,270
Realized Losses	(25,548,222)
Unrealized Gains	1,958,518,982
Unrealized Losses	(2,641,543,633)
Total Sales/Redemptions this Year: Amount Received	—
Cash Dividends Distributions to System this Year	(1,664,350,030)
Fees Paid	(128,709,643)
Market Value at the End of this Year	\$ 24,744,674,611



## Appendix C

## Supplementary Schedules

**Schedule 6: Summary of Investments Owned**

For the year ending June 30, 2016

	PERAC Ledger Number			
	1040 Cash	1198 PRIT Cash	1199 PRIT Fund	Total
Current Market Value	\$ 84,499,690	\$ 22,315,100	\$ 24,744,674,611	\$ 24,851,489,401
Commissions Paid During Current Year	\$ 0	\$ 128,709,643	\$ 0	\$ 128,709,643
Investment Income Received During Year	\$ 205,881	\$ 227,365	\$ 569,926,142	\$ 570,359,388

## Appendix D

## Prior Years' Statements of Funds Flow

For the year ended June 30, 2015

	2014 Balance	Receipts	Inter-Fund Transfers	Disbursements	2015 Balance
Annuity Savings Fund	\$ 6,136,293,889	\$ 724,934,872	\$ (380,674,319)	\$ 49,453,054	\$ 6,431,101,388
Annuity Reserve Fund	2,532,361,548	78,540,492	380,688,090	494,252,852	2,497,337,278
Pension Fund	—	1,159,936,404	1,089,891,433	2,249,827,837	—
Military Service Fund	222,989	11,807	(13,771)	—	221,025
Expense Fund	—	176,921,715	—	176,921,715	—
Pension Reserve Fund	16,869,766,904	720,533,023	(1,089,891,433)	—	16,500,408,494
<b>Total All Funds</b>	<b>\$ 25,538,645,330</b>	<b>\$ 2,860,878,313</b>	<b>\$ —</b>	<b>\$ 2,970,455,458</b>	<b>\$ 25,429,068,185</b>

## INTER-FUND TRANSFERS

Transfer from...	Annuity Savings Fund	Annuity Reserve	Pension Fund	Military Service Fund	Expense Fund	Pension Reserve Fund	Total
Annuity Savings Fund to Annuity Reserve Fund	\$ (380,674,319)	\$380,674,319	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Military Service to Annuity Reserve Fund	0	13,771	0	(13,771)	0	0	0
Pension Reserve Fund to Pension Fund for Fund Pensions	0	0	1,089,891,433	0	0	(1,089,891,433)	0
	\$ (380,674,319)	\$380,688,090	\$1,089,891,433	\$(13,771)	\$ 0	\$(1,089,891,433)	\$ 0

## Appendix D

**Prior Years' Statements of Funds Flow** (continued)

For the year ended June 30, 2014

	2013 Balance	Receipts	Inter-Fund Transfers	Disbursements	2014 Balance
Annuity Savings Fund	\$ 5,933,509,751	\$ 706,317,313	\$ (456,369,028)	\$ 47,164,147	\$ 6,136,293,889
Annuity Reserve Fund	2,505,338,054	79,644,451	382,509,618	435,130,575	2,532,361,548
Pension Fund	—	1,056,678,343	1,112,295,750	2,168,974,093	—
Military Service Fund	219,177	3,812	—	—	222,989
Expense Fund	—	173,839,873	—	173,839,873	—
Pension Reserve Fund	14,259,210,314	3,648,992,930	(1,038,436,340)	—	16,869,766,904
<b>Total All Funds</b>	<b>\$ 22,698,277,296</b>	<b>\$ 5,665,476,722</b>	<b>\$ —</b>	<b>\$ 2,825,108,688</b>	<b>\$ 25,538,645,330</b>

## INTER-FUND TRANSFERS

Transfer from...	Annuity Savings Fund	Annuity Reserve	Pension Fund	Military Service Fund	Expense Fund	Pension Reserve Fund	Total
Annuity Reserve Fund to Pension Reserve Fund	\$ 0	\$ (27,545,259)	\$ 0	\$ 0	\$ 0	\$ 27,545,259	\$ 0
Annuity Savings Fund to Annuity Reserve Fund	(410,054,877)	410,054,877	0	0	0	0	0
Annuity Savings Fund to Pension Reserve Fund	(46,314,151)	0	0	0	0	46,314,151	0
Pension Reserve Fund to Pension Fund for Fund Pensions	0	0	1,112,295,750	0	0	(1,112,295,750)	0
	\$ (456,369,028)	\$ 382,509,618	\$ 1,112,295,750	\$ 0	\$ 0	\$ (1,038,436,340)	\$ 0

## Appendix E

### Actuarial Valuation and Assumptions

The most recent actuarial valuation of the System was prepared by PERAC as of January 1, 2016.

The Normal Cost for Employees on that Date was	\$	642,712	10.06% of payroll
The Normal Cost for the Employer was		232,687	3.64% of payroll

The Actuarial Liability for Active Members was	\$	19,349,485
The Actuarial Liability for Retired Members was		27,213,322
Total Actuarial Accrued Liability		46,562,807
System Assets as of that Date		24,593,787
Unfunded Actuarial Accrued Liability		21,969,020

The principal actuarial assumptions used in the valuation are as follows:

<b>Investment Return</b>	7.50% per annum
<b>Rate of Salary Increase</b>	4.0 – 7.5% based on years of service

### Scheduling of Funding Progress

(Dollars in thousands)

Actuarial Valuation Date	January 1, 2016
Actuarial Value of Assets (a)	\$ 24,593,787
Actuarial Accrued Liability (AAL) (b)	46,562,807
Unfunded AAL (UAAL) (b-a)	21,969,020
Funded Ratio (a/b)	52.8%
Covered Payroll (c)	6,388,732
UAAL as a % of Covered Payroll ((b-a)/c)	343.87%